

REMARKS

In response to the Office Action mailed on September 11, 2006, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following amendments as well as remarks discussing patentability of rejected and newly added claims.

Claims 1-46 are original claims filed in the subject Application. Claims 47-51 are being added by way of this amendment. Thus, after entry of this Amendment, claims 1-51 will be pending. No new matter was added to the application when adding the new claims.

The following remarks address the rejections of claims 1-46 as set out in the present Office Action as well as patentability of newly added claims 47-51. Applicants respectfully request reconsideration.

Applicants encourage the Examiner to call the below named Attorney if such a call will help expedite prosecution of this application to issuance.

Rejection of Pending Claims 1-46 under 35 U.S.C. §102(e)

The Examiner has rejected original claim 1 under 35 U.S.C. §102(e) as being anticipated by Grace (U.S. Publication 2004/0075680). The Office Action likens elements in Grace to those in claim 1 to reject the claimed invention.

Applicants have reviewed the Grace disclosure and respectfully submit, contrary to observations presented in the pending office action, that claim 1 includes patentable limitations over this reference.

For example, the last element of claim 1 recites: "graphically displaying a first relationship view of the selected managed entity and at least one other

managed entity of the storage area network based on use of columns of icons, a first column including at least one icon graphically representing a managed software entity, a second column including at least one icon graphically representing a managed storage entity, at least a portion of the sequence of relationships being graphically represented by relationship paths between the at least one icon in the first column and the at least one icon in the second column."

Applicants respectfully submit that neither cited references teaches or suggests displaying a relationship view of resources (e.g., managed entities) based on use of columns including corresponding relationship paths between icons in a first column and a second column. More specifically, the Examiner points out that figures 2 and 3 in Grace as well as FIGS. 6-12 of Grace anticipate the claimed invention. Applicants respectfully disagree with this assertion because the content of these figures and corresponding text in the cited publication is not what Applicants have claimed as their invention.

First, the claimed invention recites a single relationship view of managed entities in a storage area network environment including columns of managed entities (e.g., icons) and relationship paths connecting the managed entities represented in column form. The office action selects features in two different display views, not a single view as in the claimed invention.

For example, Grace illustrates (in figures 2 and 3) multiple network devices and corresponding relationships as is known in the prior art. However, these figures do not display the resources in a column form as in the claimed invention. Rather, the devices are randomly displayed on a corresponding display screen in a circular fashion. Thus, neither of these figures anticipates the claimed invention.

Additionally, Applicants submit that figures 6-12 also do not recite the claimed invention. For example, figures 6-12 in Grace merely illustrate different groupings (e.g., types) of resources that can be viewed on a display screen. There are no relationship paths in any of these latter figures of Grace connecting a corresponding icon in a first column to a corresponding device in a second column. Accordingly, this aspect of Grace also does not disclose the claimed invention.

Contrary to the statement in the office action that the columns in figures 6-12 of Grace are merely a layout of the devices shown in figures 2 and 3, Applicants respectfully submit that none of the names of the devices in figures 2 and 3 match the names of devices in figures 6-12. Thus, this observation in the office action is incorrect.

Even if the statement in the office action is correct, Grace does not anticipate the claimed invention. For example, assume, *arguendo*, that the devices in figures 6-12 are the same as those in figures 2-3. In such a case, in order to display the resources in a respective format, the user would have to provide input such as click on resources in the displayed hierarchy and then select a format for displaying corresponding information. Thus, the viewer has to click and view multiple different screens to view resources and corresponding relationships in Grace. The claimed invention includes columns of icons repository storage area network resources with corresponding relationship paths in the same figure. The user does not need to provide input through multiple different screens to view such information. The claimed invention is advantageous because it includes columns of icons that include corresponding relationship paths in a single viewing rather than in multiple different viewings as in Grace. Accordingly, the claimed invention is unique and advantageous over the cited prior art.

-24-

Additionally, note that claimed invention recites inclusion of "a first column including at least one icon graphically representing a managed software entity, a second column including at least one icon graphically representing a managed storage entity." Thus, the relationship paths in the claimed invention enable a viewer to identify a relationship between software managed entities (e.g., data, files, database information, etc.) in the first column and storage entities (e.g., resources to store the software entities) in the second column. The cited reference provides no such equivalent. Accordingly, this further distinguishes the claimed invention over the cited prior art.

For the reasons stated above, Applicants submit that claim 1 is patentably distinct and advantageous over the cited prior art, and the rejection of claim 1 under 35 U.S.C. §102(e) should be withdrawn. Accordingly, allowance of claim 1 is respectfully requested. If the rejection of claim 1 is to be maintained, Applicants respectfully request that it be pointed out with particularity where the cited prior art discloses the above limitations.

By virtue of dependency with respect to claim 1, claims 2-14 should also be in allowable condition as well.

Independent claim 15 recites displaying of one or more software managed entities in a first column and one or more hardware managed entities in a corresponding second adjacent column. Additionally, the claim recites displaying associations between such entities via relationship paths between icons in the first column and icons in the second column. For similar reasons as discussed above, the recited reference does not teach or suggest the claimed invention as in claim 15. By virtue of dependency, claims 16-21 should also be in allowable condition as well.

Claims 22-39 parallel method claims 1-21 and, for applicable reasons as stated above, should be in condition for allowance.

For applicable reasons as discussed above for claim 1, claims 45 and 46 should be in condition for allowance as well.

Claim 43 recites similar limitations as claim 1 and yet recites a third column including one or more icons to represent yet other managed entities in a storage area network environment. For applicable reasons as discussed above, Applicants respectfully submit that claim 43 is in condition for allowance. Claim 43 includes further limitations not found in Grace. For example, claim 43 recites inclusion of diagonal paths as well as third column of one or more icons. The office action fails to cite any teachings in Grace equivalent to these limitations. By virtue of dependency, claim 44 should also be in allowable condition as well.

Claim 2 of the subject application recites "based on processing of information in the data structures, generating a horizontally disposed first relationship view of adjacently positioned columns including the first column of at least one icon, the second column of at least one icons, and corresponding relationship paths from the perspective of an icon representing the selected managed entity." The office action states that figures 2 and 3 as well as figures 6-12 teach an equivalent limitation. Applicants respectfully traverse this rejection because none of the figures in Grace disclose adjacently disposed columns of icons as in the claimed invention. Instead, Grace displays a random ordering of resource in a storage area network environment. Moreover, none of the figures in Grace illustrates a relationship path from the perspective of an icon (e.g., a selected managed entity). Accordingly, Applicants respectfully request allowance of claim 2.

Claim 3 recites "providing a viewer controlled device supporting movement of a corresponding pointer on the display screen; and highlighting a relationship path in a vicinity of the pointer on the display screen to emphasize a corresponding relationship between managed entities represented by icons in the first and second columns." The office action recites paragraph 53 of Grace as an equivalent. This passage reads as follows:

Referring to FIG. 7, a view is shown of a graphical user interface 700 showing an expandable tree diagram 702 of expandable symbols 704 representing network devices and a summary 706 of a user selected symbol 708. The SAN symbol 708 is highlighted to indicate its selection, together with the Summary Option 762. In this example, the interface 700 represents a comparison of the network from a first time to a second time. A portion 731 of the Fabrics branch 730 has been altered in some way between the first and second times (e.g., the fabric is no longer detected). The symbol 731 for the portion of the Fabrics branch 730 is shown in altered form to indicate the change. In this example, the symbol 731 is shown translucently with respect to the symbols that do not reflect a change. The parent symbol 730 for changed parameter 731 can also be displayed translucently to indicate a change within that branch of the tree diagram 702 or it can be displayed in a highlight color to alert the user.

Applicants respectfully traverse this rejection because none of the figures or corresponding text in Grace discloses use of a pointer as recited by claim 3. Moreover, there is no highlighting of a relationship path that happens to be in a vicinity of the pointer. This aspect of the claimed invention enables the viewer to temporarily highlight a portion of relationship paths and view it differently than other relationship paths. Accordingly, Applicants respectfully request allowance of claim 3.

Claim 4 recites "allocating a visual region in relation to a corresponding icon to receive input commands; and in response to detecting receipt of a generated input command in the visual region by a user, expanding the first relationship view of managed entities in the storage area network into an expanded relationship view including a third column of multiple icons disposed between the first column and the second column, relationship paths being displayed between icons in the first column and the third column and between icons in the third column and the second column, the icons in the third column representing other previously hidden managed entities associated with the storage area network." Applicants respectfully traverse the rejection of claim 4 because none of the cited paragraphs in Grace used to reject the claimed invention teach or suggest a technique equivalent to this claim limitation.

For example, the cited prior art does not illustrate an expanded view including an extra column (e.g., third column). Instead, the cited passages describe use of a hierarchical tree as known in the prior art. Moreover, the cited passages do not recite the additional relationship paths between icons in the third column and the first and second column that are present in the expanded view. Thus, the claimed invention enables the viewer to selectively expand a topology and view additional columns of managed entities and corresponding relationships that were not present in a previous viewing. The cited prior art recites no such functionality. Accordingly, Applicants respectfully request allowance of claim 4.

Claim 7 recites " displaying a first container encompassing at least one of the columns and corresponding icons; and displaying a second container encompassing at least two of the columns and corresponding icons and the first container." The office action recites paragraph 48 of Grace as an equivalent. These passages read as follows:

-28-

[0048] In the example shown in FIG. 6, the tree diagram 602 forms only a portion of the graphical display 600. A summary display 606 is also included that provides information regarding the user selected symbol 608, which is in this example the symbol for the entire SAN. The summary 606 includes a summary menu 650 of user configurable options. In this example, such options refer to various information queries that are reported to describe selected symbol 608. In the example shown in FIG. 6, the Summary Option 662 has been selected, such that the Summary Window 606 displays general information regarding the items represented by selected symbol 608 (e.g., the next layer of detail describing Fabric Symbol 630, SCBs Symbol 632, Switch Groups Symbol 634, and Port Groups Symbol 636).

Applicants respectfully traverse this rejection for a number of reasons. First, the cited passage in Grace does not indicate inclusion of a container within a container as recited by claim 7. Moreover, there is no indication that a first container encompasses at least one column and that the second container encompasses at least two columns. Accordingly, Applicants respectfully request allowance of claim 7.

Claim 8 recites "from the first relationship view including at least the first column and second column displayed in a first area of a display screen, detecting a user selection of a particular icon in the first area; and in response to detecting the user selection of the particular icon in the first area, generating a second relationship view in a second area of the display screen, the second relationship view including a presentation of relationships between a managed entity associated with the particular icon and other associated nearest neighboring managed entities in the storage area network." The office action recites paragraph 48 and 56 of Grace as an equivalent. Applicants respectfully traverse this rejection for a number of reasons. The cited passage in Grace does not indicate creation of a second relationship view based on selection with respect to



a first relationship view as recited by claim 8. For example, Grace includes a summary window 606. However, the summary window 606 in Grace does not enable selection of a particular icon and, based on the selection, generation of another relationship view including the selected icon as well as neighboring resources. Accordingly, Applicants respectfully request allowance of claim 8.

Claim 9 recites "wherein the second relationship view is generated in response to a viewer dragging and dropping the particular icon from the first area to the second area of the display screen." The office action recites that paragraph 35 of Grace includes an equivalent to the claimed invention. Applicants respectfully submit that merely disclosing that a computer system can include a device to change the status of a program as in the cited passages of Grace is not equivalent to the limitation as recited by claim 9. For example, claim 9 recites a very specific action for creating a relationship view resources in a respective storage area network environment. The cited passage provides no indication that the specific act of dragging and dropping can produce a relationship view. Accordingly, Applicants respectfully request allowance of claim 9.

Claim 10 recites "maintaining the display screen to include a third area to display a vertical hierarchy of managed entities associated with the storage area network; providing selectable input fields in relation to entries in the vertical hierarchy for selection of a managed entity in the storage area network; and in response to detecting selection of a particular entry in the vertical hierarchy, generating the first relationship view from the perspective of a corresponding selected managed entity." The office action recites that paragraph 12 of Grace includes an equivalent to the claimed invention. Applicants respectfully submit that generation of an event log or summary view as in Grace is not equivalent to creation of a relationship view as in the claimed invention. More specifically, generation of an event log is not equivalent to generation of a relationship view

-30-

including columns of icons and corresponding relationship paths as recited by claim 10. The summary view in Grace also does not recite the format of the relationship view as recited by the claimed invention. Accordingly, Applicants respectfully request allowance of claim 10.

Claim 11 recites "maintaining a database of objects identifying relationships between the managed entities via collection of information from agents distributed throughout the storage area network." The office action recites that paragraphs 11 and 13 of Grace includes an equivalent to the claimed invention. Applicants respectfully submit that Grace may happen to disclose that a given process determines what devices are present in a network as indicated in the office action. However, there is no indication that the teachings of Grace include maintaining a database of information via collection of information from agents distributed throughout a respective storage area network environment. Accordingly, Applicants respectfully request allowance of claim 11.

Claim 12 recites "maintaining a display screen to include an area to display a vertical hierarchy of managed entities associated with the storage area network; providing selectable input fields in relation to entries in the vertical hierarchy for selection of a managed entity in the storage area network; and in response to detecting selection of a particular entry in the vertical hierarchy, generating the first relationship view from the perspective of a corresponding selected managed entity." The office action recites that paragraph 12 of Grace includes an equivalent to the claimed invention. However, Applicants respectfully submit that generation of an event log or a summary view of resource parameters as in Grace is not equivalent to creation of a relationship view as in the claimed invention. More specifically, generation of an event log is not equivalent to generation of a relationship view including columns of icons and corresponding relationship paths as recited by claim 12. Nor is merely displaying attributes associated with a selected resource. Thus, selection of an resource

-31-

entry in a hierarchical tree does not produce a relationship view for the selected resource entry as recited by claim 12. Accordingly, Applicants respectfully request allowance of claim 12.

Claim 13 recites " wherein the first relationship view identifies a mapping between a file system of a host server and a corresponding storage disk of the storage area network." The office action recites that paragraph 34 of Grace includes an equivalent to the claimed invention. Applicants respectfully submit that Grace merely discloses that a storage area network can include a number of resources as illustrated in FIG. 1. However, the claimed invention recites a very specific technique of displaying resources in columns of a relationship view on a display screen and providing relationship paths between such resources in the columns. There is no indication that Grace illustrates a mapping between a file system and a host server in this way. In fact, Applicants are unable to find a case in which any single figure in Grace illustrates both a file system and a host server. Accordingly, Applicants respectfully request allowance of claim 13.

In a similar vein as discussed above for claim 13, Grace may indicate that a storage area network includes different types of resources as indicated by the office action. However, there is no indication that Grace discloses use of a relationship view of columns and corresponding different types of icons represent different type of resources as in the claimed invention. Accordingly, Applicants respectfully request allowance of claim 14.

For similar reasons as discussed for the above dependent claims 2-14, claims 23-35 should be in condition for allowance as well.

Applicants respectfully submit that dependent claims 16-21 include further distinctions over the cited prior art. For example, dependent claim 16 recites "in relation to a first icon of the multiple icons, maintaining a visual region associated

-32-

with the first icon to receive input commands from a user indicating to expand and display hidden attributes associated with a corresponding managed entity associated with the first icon." The office action recites that paragraph 12 of Grace includes an equivalent to the claimed invention. This paragraph reads as follows:

[0012] Network parameters, such as the devices coupled to the network and the configurations of such devices, can be displayed in various ways under the invention. For example, such information can be displayed in diagram form or in table form. In a preferred embodiment, the graphical user interface includes an expandable tree diagram of expandable symbols that can be navigated to explore the structure of a network. As an example, the tree diagram can be one of a series of windows that make up the user interface as a whole. In various possible embodiments, other portions of the user interface (e.g., windows) can include a summary of a symbol of the tree diagram that is selected by a user, and an event log displaying a running history of network connectivity and configuration changes that are detected. Various possible embodiments may include other features as described herein, either alone or in combination.

Applicants respectfully submit that this passage in Grace and cited text merely discloses that an expandable tree diagram of expandable icons can be used to explore the structure of a network. This is not what Applicants claim as their invention. In contradistinction to this teaching, the claimed invention is directed towards enabling navigation amongst adjacent columns of icons having corresponding relationship paths between columns. Thus, contrary to the observation provided in the office action, the cited reference does not disclose the claimed invention. Accordingly, Applicants respectfully request allowance of claim 16.

With respect to dependent claim 17, creating an event log or summary of a symbol of the tree as disclosed in Grace is not equivalent to displaying relationship paths in a relationship view of columns of managed entities as in the claimed invention. Accordingly, for similar reasons as discussed above, Applicants respectfully submit that the rejection is improper and request allowance of claim 17.

Claim 18 recites "displaying a graphical container encompassing the first icon and the expanded relationship view of the managed entity associated with the first icon to indicate that the additional icons and corresponding managed entities are related to the first icon and corresponding managed entity." The office action recites that paragraph 12 of Grace includes an equivalent to the claimed invention. This paragraph reads as follows:

[0012] Network parameters, such as the devices coupled to the network and the configurations of such devices, can be displayed in various ways under the invention. For example, such information can be displayed in diagram form or in table form. In a preferred embodiment, the graphical user interface includes an expandable tree diagram of expandable symbols that can be navigated to explore the structure of a network. As an example, the tree diagram can be one of a series of windows that make up the user interface as a whole. In various possible embodiments, other portions of the user interface (e.g., windows) can include a summary of a symbol of the tree diagram that is selected by a user, and an event log displaying a running history of network connectivity and configuration changes that are detected. Various possible embodiments may include other features as described herein, either alone or in combination.

Applicants respectfully submit that this passage in Grace and cited text merely discloses that an expandable tree diagram of expandable icons can be used to explore the structure of a network. The summary of the symbol selected from the

expandable tree does not include a relationship view of columns of icons and corresponding relationship paths. In other words, the summary display 606 in FIG. 6 of Grace does not illustrate any relationship paths between managed entities as recited by the claimed invention. Thus, the cited passage is not equivalent to what Applicants claim as their invention. Instead, the claimed invention is directed towards selection of one or more entries in a hierarchical tree, generation of a navigable relationship view of columns of resources associated with the selected managed entity. The viewer therefore can select a managed entity from a hierarchical tree and thereafter navigate amongst a relationship view associated with the selected managed entity. Thus, contrary to the office action, the cited reference does not disclose the claimed invention. Accordingly, Applicants respectfully request allowance of claim 18.

With respect to claim 19, merely stating that the storage area network in Grace is a simplified view (as opposed to a more complex view) is not equivalent to "displaying nested graphical containers encompassing different sets of icons to delineate corresponding functional components associated with a host server of the storage area network." Accordingly, Applicants respectfully request allowance of claim 19 over the cited prior art.

In a similar vein as discussed above for claim 20, merely stating that the storage area network in Grace is a simplified view (as opposed to a more complex view) is not equivalent to "displaying a first graphical container encompassing icons representing managed entities associated with a host server of the storage area network; displaying a second graphical container encompassing icons representing managed entities associated with a storage device of the storage area network; and displaying relationship paths between icons in the first graphical container and icons in the second graphical container to indicate a device mapping between the host server and the storage device."

Accordingly, Applicants respectfully request allowance of claim 20 over the cited prior art.

For similar reasons that claim 13 is allowable, claim 21 also should be in condition for allowance over the cited prior art.

For similar reasons as discussed above for dependent claims 16-21, dependent claims 36-42 should be in condition for allowance as well.

New claims 47-51

Support for newly submitted claims 47-51 can be found in FIGS. 4, 8, and 11 as well as corresponding text in the subject application. Applicants respectfully submit that these claims further distinguish the invention in claim 15 over the cited art as they include techniques not found in any of the cited references.

For example, claim 47 depends from claim 15 and recites "wherein displaying the at least one hardware icon in the second column includes displaying multiple hardware icons in the second column; and wherein displaying associations includes providing multiple relationship paths between the at least one software icon in the first column and each of the multiple hardware icons in the second column to indicate where data represented by the at least one software icon in the first column is stored in corresponding hardware devices which are represented by the multiple hardware icons in the second column." Grace provides no such relationship view.

Claim 48 depends from 47 and recites "wherein displaying multiple hardware icons in the second column includes displaying similar types of corresponding symbols in the second column to indicate that the corresponding

hardware devices are of the same type." As illustrated in the figures of Grace, there are no columns of managed entities of the same type.

Claim 49 depends from claim 48 and recites "displaying unique identification information associated with the at least one software icon in the first column; and displaying unique identification information associated with each of the multiple hardware icons in the second column." This enables a viewer to easily identify the resources in the relationship view of the claimed invention.

Claim 50 depends from claim 15 and recites "wherein displaying the at least one software icon in the first column includes displaying multiple software managed entities as respective software icons in the first column; wherein displaying the at least one hardware icon in the second column includes displaying multiple hardware managed entities as respective hardware icons in the second column; and wherein displaying associations includes providing at least two horizontal relationship paths between the respective software icons in the first column and the respective hardware icons in the second column." Accordingly, the relationship view can illustrate multiple different relationship paths at the same time.

Claim 51 depends from claim 50 and recites: "wherein displaying the associations includes: displaying a first relationship path of the at least two relationship paths from a first software icon in the first column to a first hardware icon in the second column; and displaying a second relationship path of the at least two relationship paths from a second software icon in the first column to a second hardware icon in the second column." Accordingly, the relationship view can illustrate multiple different relationship paths at the same time.

Applicants respectfully request allowance of new claims 47-51 as well originally pending claims 1-46.



CONCLUSION

In view of the foregoing remarks, Applicants submit that the pending claims as well as newly added claims are in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after reviewing this Response, that the pending claims are not in condition for allowance, the Examiner is respectfully requested to call the Representative below.

Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

Respectfully submitted,



Paul P. Kriz, Esq.

Attorney for Applicant(s)

Registration No.: 45,752

CHAPIN & HUANG, L.L.C.

Westborough Office Park

1700 West Park Drive

Westborough, Massachusetts 01581

Telephone: (508) 366-9600

Facsimile: (508) 616-9805

Customer No.: 022468

Attorney Docket No.: EMC03-14(03084)

Dated: December 8, 2006